

# Journals and JPGs

## Introducing Youth to Wildlife in Colorado and Wyoming

By Karen Leggett

**National Elk Refuge is in its fifth year of partnering with multiple organizations to provide a structured program for second-graders in two local elementary schools with large Hispanic populations. One is a nonprofit organization called pARTners, which helps educators use art to enhance learning and invited the refuge to organize some field trips.**

Lori Iverson, supervisory recreation planner at National Elk Refuge, thought it was a perfect chance for “kids to learn a sense of place and use journaling to watch a place change throughout the seasons.” Iverson participates in planning meetings with several organizations, including pARTners, all committed to creating an interdisciplinary environmental education program centered on visits to or near the refuge. “It’s one large program,” says Iverson, “with many elements.”

During the first program in 2006, professional artists and photographers provided basic drawing and photography lessons in the classroom to 150 children, who also learned how art can be applied to science. Children brought journals and cameras provided by the Jackson Hole Wildlife Film Festival on each trip to the refuge. They filled their journals with stories and observations and created keepsake covers to preserve their work. After each visit, Film Festival staff gave students a 4x6 copy of one of their photos to put in the journal. Each class also received digital copies of all the student photos.

### Seasonal Visits to the Refuge

Before the first trip to the refuge in October, a local geologist met students in the classroom to introduce the concept of how geology influences the flora and fauna of a region. A geologist also accompanied the students on their

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*Students use hand lenses and an aquatic insect chart to identify food sources for the birds they observed earlier in the day.*

visit to the refuge to study such rock formations as Miller Butte.

Before the winter visit to the refuge, youngsters learned in the classroom about the area’s common mammals and the role of predators in the ecosystem. This lesson was provided by Beringia South, a local nonprofit organization dedicated to preservation of the natural environment. A refuge staff person visited the classroom once to teach students about elk migration and biology, including winter survival habits, as well as appropriate ways to view wildlife to reduce stress on the animals.

The winter visit to the refuge included a sleigh ride during which students identified the major Jackson Hole landforms, learned to tell the difference between mature male and female elk and describe such elk behaviors as mewing, bugling and sparring. They also visited the feed shed to learn about the refuge’s role in supplementing winter feeding.

Classes in the spring focused on raptors and migratory birds. Students dissected pellets in the classroom to identify the creatures being consumed by birds. On the refuge, students identified birds at a wetland site.



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### Open to Change

The program created by National Elk Refuge and its partners addresses at least four state curriculum standards:

1. Students describe the landforms in Jackson Hole.
2. Students learn about the interdependence of all living things.
3. Students learn how they are responsible members of their community and the environment around them.
4. Students understand the possible hazards during scientific investigations and practice safety procedures.

While lessons are designed to meet these standards, the specifics may change from year to year according to the interests and capabilities of participating organizations. In 2010, for example, Gina Pasini, a seasonal biological technician at Red Rock Lakes National Wildlife Refuge in Montana, spent a two-week detail at National Elk Refuge developing learning stations for the spring field trip.



*Supervisory recreation planner Lori Iverson discusses nature journals with students.*

At one station, a refuge volunteer taught students how to use binoculars and took them on a bird walk. At the second station, Pasini focused on bird beaks and foods. After a short lesson about how beaks are adapted for the food a bird eats, children used hand lenses to identify aquatic insects that had been scooped from the water by student volunteer Cord Schultz, who was completing 40 hours of required community service on the refuge. Then Pasini prepared a “macroinvertebrate soup” with the insects available nearby.

### **Making School Collaborations Work**

Iverson, a former teacher herself, believes there are several keys to initiating and maintaining effective partnerships with schools.

✦ Find out what a particular school or teacher needs. “Teachers always get requests from people who want to come into their classroom. As an environmental educator, you have to ask, ‘What can I do for you?’ rather than, ‘Here’s something I have for you.’”

✦ Communicate with teachers regularly – typically with one lead teacher from each school.

✦ Make sure lessons are aligned with curriculum objectives, which are usually established by states and local school districts; many states are now

adopting national core standards. These standards are available online and might include such objectives as, “Students communicate the basic needs of living things and their connection to the environment.” Some states, including California and Maryland, have specific environmental literacy standards.

✦ Don’t just look at science standards; teach to other subject areas wherever you can, especially language arts, social studies or math. Iverson always tries to mention other subjects she knows teachers must cover: “Adaptation. That’s a big word – let’s spell it. Or perhaps, if there is a food source available, but it’s a long ways away, an

*“If you put a camera in someone’s hands, they have to look at the world more closely,” says photography instructor David Showalter.*



David Showalter

animal may not go to get it. If there are 1,000 calories of food but they’re 500 yards away, how much energy will the animal expend to get the food?”

✦ Before visiting a classroom, focus some attention on classroom management. Find out if there are children with disabilities who need accommodations, if there are behavioral issues, or if some children don’t speak English.

### **Cameras in Action at Rocky Mountain Arsenal**

Rocky Mountain Arsenal National Wildlife Refuge in Commerce City, CO, has also used cameras with grand effect – including student photos displayed in the rotunda of the state capitol in Denver.

In 2008, former refuge education specialist Stacy Armitage contacted Pentax, headquartered in nearby Golden, seeking someone who could co-teach a photography class. Instead, Pentax donated 10 cameras, lenses and memory cards. David Showalter, a professional photographer who was taking pictures on the refuge for a book, agreed to volunteer his skills for a refuge photography program with at-risk youth. Cameras in Action began as a three-day summer workshop to connect kids to nature.

“I didn’t know how important it was until I started doing it,” said Showalter, who photographed the refuge for his book *Prairie Thunder*. “Give kids a camera, and it completes the circuit between them and nature. They start crawling around and bringing back a lot of intimate landscapes. It’s almost like they are hard-wired to explore.”

The program targets 15- to 17-year-olds, often minorities, both from area high



schools and The Link, a local resource center for at-risk young people. The executive director's husband volunteered at the refuge. About 16 students participate each year. The program took a break in 2011 while the refuge finished its new visitor center. In 2012, the refuge will offer a two-day workshop for high school students plus a two-day program for middle school students, which is a more appropriate match for the youngsters served by The Link. The changes were made to spread scarce resources as broadly as possible and continue the successful partnership with The Link.

Two-day workshops mean time is of the essence. "Maximize time in the field," emphasizes Showalter. "There is no reason to spend time learning Photoshop™ when we can get kids in the field or photographing a detail of a bird feather in the visitor center." The teens work in pairs, each team named for a refuge animal. Armed with cameras and field guides, the teams are

expected to return with observations written in a notebook, information from a field guide – and ideally – photos of their team's critter. At the end of the day, they gather to evaluate each other's photos.

Each student has a camera – a high-end digital SLR in this case. But Van Dreese cautions, "The more elaborate the camera, the more knowledgeable the instructor must be. A simple point and shoot could be most useful. I don't know that a specific camera is what makes this program so successful. In fact, I sometimes find our fancy cameras have too many functions and confuse the kids."

Workshop participants choose their best photo for display in the Colorado State Capitol Building, an opportunity arranged by a refuge volunteer who also volunteered at the Capitol. The Friends of the Front Range – the refuge Friends organization – paid to have each photo framed; the framed photos are later auctioned by the Friends as a fundraiser. Participants take home a framed photo as well as a

CD of all their photos and 10 prints of any size they choose. They also receive a certificate showing themselves taking pictures.

"The presentation at the capitol was a big deal," says L.A. Rogers, assistant director at The Link. "We work with a lot of lower income youth who don't always have opportunities. Being trained by a professional photographer and being able to pick a picture to share – every kid was at the capitol with a parent or representative. This was definitely on the 'cool' spectrum!"

Showalter acknowledges that everyone, even professional photographers, "needs affirmation and a sense of accomplishment," but he perceives a larger purpose for Cameras in Action as well. "If you put a camera in someone's hands, they have to look at the world more closely. We need to light a lot of sparks or we are going to have a conservation void in the future."



*Refuge volunteer Jim Snyder points out a bird's nest in the cattails to a group of young naturalists.*

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